

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of the Claims:

1. (Amended) A regulator for outputting a ~~ground-speed~~ signal to an agricultural dispenser for applying chemicals to a field or for planting seeds, the regulator comprising:

a GPS unit for outputting a ~~velocity~~ ground speed signal indicative of the velocity of the agricultural dispenser in response to satellite signals; and

a converter for converting the ~~vehicle~~ ground speed signal to a series of pulses having a frequency indicative of the ground speed signal and outputting the series of pulses to the agricultural dispenser.

2. (Original) The regulator as defined in Claim 1, further comprising:
the GPS unit and the converter being mounted on a self-propelled vehicle; and
a wireline electrically interconnecting the converter with the dispenser positioned on a trailered implement.

3. (Original) The regulator as defined in Claim 1, further comprising:
a battery supported on the self-propelled vehicle; and
a cable transmits power from the battery to the dispenser and houses the wireline which connects the converter to the dispenser on the trailered implement.

4. (Amended) The regulator as defined in Claim 1, wherein the GPS unit outputs an updated ~~velocity~~ signal ground speed signal at least every two seconds.

5. (Amended) A GPS receiver as defined in Claim 1, wherein the GPS unit outputs an updated ~~velocity~~ ground speed signal at least every second.

6. (Original) The regulator as defined in Claim 1, further comprising:

a voltage regulator for receiving power from a battery and outputting a controlled voltage to power the GPS unit and the converter.

7. (Original) The regulator as defined in Claim 1, further comprising:
a driver for increasing the voltage of the series of pulses output from the converter and supplying increased voltage pulses to the dispenser.

8. (Original) The regulator as defined in Claim 1, wherein the converter outputs a series of pulses each having a pulse duration substantially equal to a delay between successive pulses.

9. (Amended) The regulator as defined in Claim 1, further comprising:
an operator input controller for varying a selected rate distributor for the agricultural dispenser, the operator input controller and the ~~vehicle~~ ground speed signal determining the frequency of the series of pulses.

10. (Original) The regulator as defined in Claim 1, when a GPS unit is detachable from the converter.

11. (Amended) A regulator for outputting a ~~ground-speed~~ signal to an agricultural dispenser for applying chemicals to a field or for planting seeds, the regulator comprising:

a GPS unit for outputting a ~~velocity~~ ground speed signal indicative of the velocity of the agricultural dispenser in response to satellite signals;

a converter for converting the ~~vehicle~~ ground speed signal to a series of pulses having a frequency indicative of the ground speed signal and outputting the series of pulses to the agricultural dispenser;

the GPS unit and the converter being mounted on a self-propelled vehicle;
and

a wireline electrically interconnecting the converter with the dispenser positioned on a trailed implement.

12. (Original) The regulator as defined in Claim 11, further comprising:
a battery supported on the self-propelled vehicle; and
a cable transmits power from the battery to the dispenser and houses the
wireline which connects the converter to the dispenser on the trailered implement.

13. (Amended) A GPS receiver as defined in Claim 11, wherein the GPS unit
outputs an updated ~~velocity~~ ground speed signal at least every second.

14. (Original) The regulator as defined in Claim 11, further comprising:
a voltage regulator for receiving power from a battery and outputting a controlled
voltage to power the GPS unit and the converter; and
a driver for increasing the voltage of the series of pulses output from the
converter and supplying increased voltage pulses to the dispenser.

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15. (Original) The regulator as defined in Claim 11, wherein the converter
outputs a series of pulses each having a pulse duration substantially equal to a delay
between successive pulses.

16. (Amended) A method of outputting a ground speed signal to an
agricultural dispenser for applying chemicals to a field or for planting seeds, the method
comprising:

providing a GPS unit for outputting a ~~velocity~~ ground speed signal indicative of
the velocity of the agricultural dispenser in response to satellite signals;

converting the ~~vehicle~~ ground speed signal to a series of pulses having a
frequency indicative of the ground speed signal; and

outputting the series of pulses to the agricultural dispenser.

17. (Original) The method as defined in Claim 15, further comprising:
mounting the GPS unit and the converter on a self-propelled vehicle; and
electrically interconnecting the converter with the dispenser positioned on a
trailered implement.

18. **(Original)** The method as defined in Claim 17, further comprising:
supporting a battery on the self-propelled vehicle; and
providing a cable for transmitting power from the battery to the dispenser and for
housing a wireline which connects the converter to the dispenser on the trailered
implement.

19. **(Original)** The method as defined in Claim 16, wherein the GPS unit
outputs an updated ground speed signal at least every two seconds.

20. **(Original)** The method as defined in Claim 15, wherein the converter
outputs a series of pulses each having a pulse duration substantially equal to a delay
between successive pulses.

21. **(Amended)** The method as defined in Claim 15, further comprising:
providing an operator input controller for varying a selected rate distribution for
the agricultural dispenser, the operator input controller and the vehicle ground speed
signal determining the frequency of the series of pulses.

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Concluded